

01-10-05

AA

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2003-294954

(43)Date of publication of application : 15.10.2003

(51)Int.Cl.

G02B 6/00
 F21V 8/00
 G02B 5/04
 // G02F 1/13357
 F21Y101:02

(21)Application number : 2002-093383

(71)Applicant : CITIZEN ELECTRONICS CO LTD

(22)Date of filing : 28.03.2002

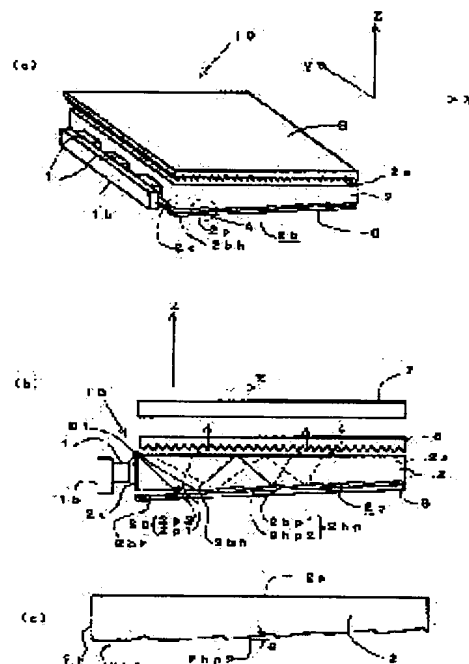
(72)Inventor : MIYASHITA JUNJI

(54) LIGHT GUIDE PLATE

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent from spoiling an appearance of a backlight unit with a light transmission plate by occurrence of a striped pattern by a bright line produced at an illumination on the light guide plate.

SOLUTION: The light guide plate 2 has an upper surface 2a, a back surface 2b and a light incident side face 2c. Plural asymmetrical prisms 2bp composed of a first slope 2bp1 which increases steeply the distance from the upper surface and a second slope 2bp2 which decreases gently the distance from the upper surface in proportion to the distance from the light incident side face 2c, are formed in the back surface 2b. In the back surface 2b, in addition to the prisms 2bp, one or more concaves or convex symmetry prisms 2p which have practically a symmetrical slope in the direction separating from the light incident side face 2c, are formed in the vicinity of light incident side face 2c.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's]

decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

AA

*** NOTICES ***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.*** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is drawing showing the back light unit using the light guide plate concerning the 1st operation gestalt of this invention.

[Drawing 2] It is drawing showing the solid configuration of the symmetry prism formed in the light guide plate shown in drawing 1 .

[Drawing 3] It is drawing showing the configuration of a light guide plate and operation which are shown in drawing 1 .

[Drawing 4] It is drawing showing the configuration of a light guide plate and operation concerning the 2nd operation gestalt of this invention.

[Drawing 5] It is drawing showing the configuration of a light guide plate and operation concerning the 3rd operation gestalt of this invention.

[Drawing 6] It is the plan showing the condition of the illumination light of the light guide plate shown in drawing 4 .

[Drawing 7] It is drawing showing the back light unit using the conventional light guide plate.

[Drawing 8] It is drawing showing the usual operation of the light guide plate shown in drawing 7 .

[Drawing 9] It is the plan showing the condition of the illumination light of the light guide plate shown in drawing 7 .

[Drawing 10] It is drawing showing an unusual operation of the light guide plate shown in drawing 7 .

[Drawing 11] It is drawing which explains to a detail the path of an unusual light of the light guide plate shown in drawing 7 .

[Description of Notations]

1 LED

2 Light Guide Plate

2a Top face

2b Inferior surface of tongue

2c ON light side face

2bh Parallel flat-surface section

2bp Unsymmetrical prism

2b p1 Falling slant face

2b p2 Start slant face

2p Symmetry prism

3 Prism Sheet

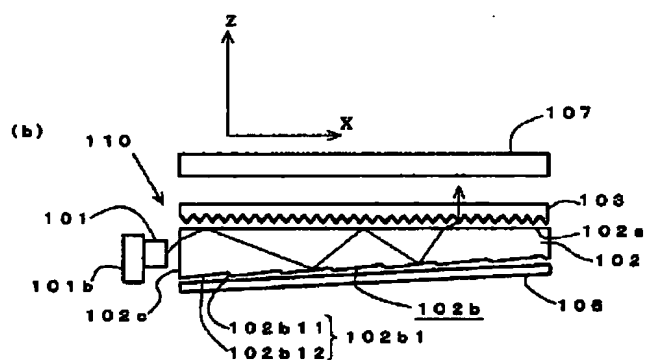
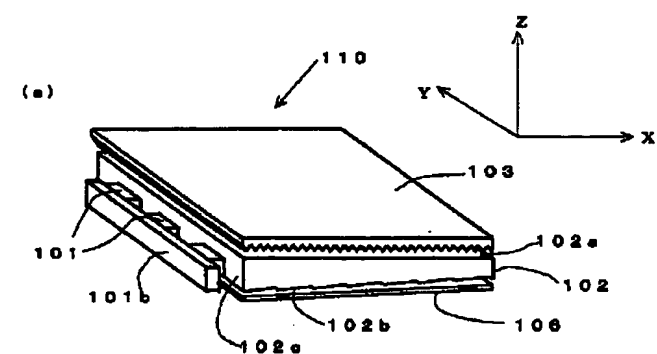
6 Reflecting Plate

7 Liquid Crystal Display Panel

10 Back Light Unit

D1, D2 Edge section

[Translation done.]

Drawing selection 

[Translation done.]